



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/841,871	04/24/2001	David M. Keicher	ODC1120-DIVA	6152

7590 01/23/2004

Jeffrey D. Myers
Peacock, Myers & Adams
P. O. Box 26927
Albuquerque, NM 87125-6927

EXAMINER

FULLER, ERIC B

ART UNIT	PAPER NUMBER
----------	--------------

1762

DATE MAILED: 01/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/841,871

Applicant(s)

KEICHER ET AL.

Examiner

Eric B Fuller

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7, 8, and 15-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1 and 9 read that the lasers are directed to approximately the same location. Dependent claims 7, 8, and 15-18 read that the lasers form multiple line deposits simultaneously. Claims 17 and 18 explicitly claim that the lines spaced apart from each other. The specification is not enabling on how multiple lines deposits are formed, especially those that are spaced apart, when the lasers are directed to approximately the same location.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7, 8, and 15-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

These claims are confusing for the above-mentioned reasons.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 6, 7, 9-12, 14, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Turchan et al. (US 5,648,127).

Turchan teaches a method of forming a thin coating a substrate (column 9, lines 6-39). Three lasers and multiple powder spray nozzles are directed to the same location on a substrate (column 26, lines 38-64). Scanning of the lasers is computer controlled (column 24, lines 30-58). The powder is heated and by the lasers (column 26, lines 55-60). A line deposit is formed (figure 4). The laser beams are individually controlled (column 24, line 66 - column 25, line 54).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeantette et al. (US 6,046,426).

Jeantette teaches the limitations of claim 1 in column 12, lines 32-64, except for the limitation of multiple lasers. Jeantette teaches a single line deposit of material. One of ordinary skill in the art, having the knowledge and ingenuity of a design engineer, would recognize that by using a second identical apparatus on the same substrate, a second line deposit could be formed simultaneously, thus reducing the deposition time. This reasoning could be extended to include three or more lasers directed to the same substrate. It would have been obvious to one of ordinary skill in the art that using a second (or third) apparatus simultaneously would increase the number of deposition zones, thus having the benefits of a larger total deposition zone compared to the single apparatus, which acts to increase the deposition rate and decrease the deposition time. To do this is a mere duplication of parts, which has been held by the courts to be obvious. *St. Regis Paper Co. v. Beemis Co. Inc.* 193 USPQ 8, 11 (1977); *In re Hazza* 124 USPQ 378 (CCPA 1947).

As to claims 5 and 12, Jeantette teaches the motion is controlled by a CAD model (column 9, lines 40-45).

As to claims 5-8 and 13-16, as discussed above, one of ordinary skill in the art would recognize that the multiple apparatuses provide a greater deposition rate by providing more a larger deposition area. Thus, precision and deposition rate have an inverse relationship when increasing the number of apparatuses used. From this, it would have been obvious to use a single apparatus when depositing in areas where precision is more important than deposition rate, such as outlining features, and to employ multiple apparatuses when deposition rate is of priority, such as filling in featureless regions. In order to achieve this, one of skill would recognize that the lasers of each apparatus must be modulated on and off independently of each other.

Response to Arguments

Applicant argues that the Rule 131 Declaration overcomes the rejections based on Beyer et al. Examiner disagrees.

The evidence submitted is insufficient to establish a reduction to practice of the invention in this country or a NAFTA or WTO member country prior to the effective date of the Beyer et al. reference. No evidence is given. Additionally, no statement is made to the acts occurring in this country or a NAFTA or WTO member country.

The evidence submitted is insufficient to establish a conception of the invention prior to the effective date of the Beyer et al. reference. While conception is the mental part of the inventive act, it must be capable of proof, such as by demonstrative evidence or by a complete disclosure to another. Conception is more than a vague idea of how to solve a problem. The requisite means themselves and their interaction must also be

comprehended. See *Mergenthaler v. Scudder*, 1897 C.D. 724, 81 O.G. 1417 (D.C. Cir. 1897). No evidence is given.

The evidence submitted is insufficient to establish diligence from a date prior to the date of reduction to practice of the Beyer et al. reference to either a constructive reduction to practice or an actual reduction to practice. No evidence is given.

However, this argument is moot as the examiner withdraws the rejections based on Bayer et al. Withdrawal is based on the clarification that the applicant's have a priority date of January 22, 1998, thus preventing Bayer et al. from being prior art.

Applicant's arguments based on Harwell et al. have been convincing. The examiner has withdrawn these rejections accordingly.

Applicant argues that the present invention is not obvious in view of Jeantette et al. because the present invention teaches means to control multiple beams. However, this is not found persuasive, as these controlling means that would differentiate the present invention from a method that merely duplicates the apparatus of Jeantette et al. are not claimed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B Fuller whose telephone number is (571) 272-1420. The examiner can normally be reached on Mondays through Thursdays.

Application/Control Number: 09/841,871
Art Unit: 1762

Page 7

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P Beck, can be reached at (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



EBF



SHRIVE P. BECK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700